

جامعة عجلون الوطنية
Ajloun National University

# DR. MOHAMMED TAWFIK

Irbid, Jordan
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## PROFILE

Assistant Professor of Cyber Security at Ajloun National University with a Ph.D. in Information Technology (Artificial Intelligence and Cyber Security). Teaches ten core courses including Cryptography, Ethical Hacking, Digital Forensics and Cloud Computing Security. Author of more than 60 peer-reviewed publications in Q1/Q2 Scopus and Web of Science journals, and reviewer of 465 manuscripts for 44 international journals.

## Personal Data

**Date of birth:** 16/10/1991
**Place of birth:** Sana'a, Yemen
**Nationality:** Yemeni

## EDUCATION

- **Ph.D. –** Information Technology (AI & Cyber Security), BAMU University, India (2024).
- **Master –** Information Technology, BAMU University, India (2018).
- **Bachelor –** Network Technology and Computer Security, Sana'a University, Yemen (2014).

## WORK EXPERIENCE

**1. Assistant Professor**: Department of Cyber Security, Faculty of Information Technology, Ajloun National University, Jordan, 2024 – Present.

a. Teaching Introduction to Cyber Security, Cryptography, Ethical Hacking, Digital Forensics Investigation, Cloud Computing Security, IoT Security, Secure Software Engineering, Cyber Crime, Artificial Intelligence in Cyber Security & Cloud Computing and Secure Communication Protocols.

b. Designed the course syllabi and the practical laboratory work for the cybersecurity programme.

c. Principal Investigator, "Secure Digital Government Systems & Data Integrity" (20,000 JOD), 2024 – 2025.

**2. Research Supervisor**: BAMU University, India, 2021 – 2024.
Supervised four Master's theses in IoT security, software-defined networking and speech recognition.

**3. Independent Research Consultant**: Eram Research Centre (remote), 2023 – Present.

**4. IT Help Desk & Network Specialist**: LiveSalesman (remote), 2019 – 2021.

**5. IT Support & Network Administrator**: DIMES Institute, 2014 – 2016.



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## SKILLS

- Advanced Deep Learning (CNNs, Transformers, Mamba, GNNs)
- Large Language Models & Generative AI
- Federated Learning & Explainable AI
- Penetration Testing & Vulnerability Assessment
- Cryptography & Secure Software Development
- Cloud Security (AWS, Azure)
- Network Security, Firewalls & IDS
- Blockchain (Solidity, Hyperledger Fabric)
- Python, PyTorch, TensorFlow
- Data Analysis (R, SPSS, Power BI)

## Languages

**Arabic (native), English, Hindi.**

## TEACHING EXPERIENCE

1. Introduction to Cyber Security
2. Cryptography
3. Ethical Hacking
4. Digital Forensics Investigation
5. Cloud Computing Security
6. Internet of Things Security
7. Secure Software Engineering
8. Cyber Crime
9. Artificial Intelligence in Cyber Security & Cloud Computing
10. Secure Communication Protocols

## PROFESSIONAL ACTIVITIES

- **Research output:** more than 60 peer-reviewed publications, most of them in Q1/Q2 journals indexed in Scopus and Web of Science, among them Scientific Reports, PLOS One, IEEE Access, IEEE Sensors Journal and Neural Computing and Applications.
- **Peer review:** 465 verified reviews for 44 journals (ORCID), including IEEE Access (198), Scientific Reports (37), Engineering Applications of Artificial Intelligence (28), Knowledge-Based Systems (24) and Journal of Information Security and Applications (23).
- **Funded research:** Principal Investigator of a 20,000 JOD university project that delivered five secure digital-government systems (health records, insurance workflows, digital identity, auditing and security governance) with a team of eight researchers and developers.
- **Research areas:** intrusion and malware detection, federated learning, explainable AI, IoT and medical IoT security, phishing and vishing detection, and privacy-preserving cloud storage.
- **Supervision:** supervised Master's theses at BAMU University and undergraduate capstone projects in IoT security at Ajloun National University.

## PROFESSIONAL CERTIFICATES

**CISA** – Certified Information Systems Auditor, ISACA (2025)

**eJPT v2** – Junior Penetration Tester, INE Security (2026)

**CompTIA CySA+** – Cybersecurity Analyst, CompTIA (2026)

**CISM** – Information Security Manager, ISACA (in progress)

## RESEARCH PROFILES

**ORCID:** 0000-0002-1227-387X

**Google Scholar:** Mohammed Tawfik

**Scopus Author ID:** 57291427700

**GitHub:** github.com/kmkholm




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## Journal Publications

1. **Tawfik, M.***, Al-sellami, B., Heshmat, M., Fathi, I. S., & Shaban, W. M. (2026). Hybrid Rank Fusion of a Group-Token Transformer with Gradient Boosting Improves Detection of Evasive and Novel-Family Malware. *Scientific Reports*. DOI: 10.1038/s41598-026-75034-w (**Q1, Scopus, WoS**)

2. Aljunaeidi, B. Z., Alawneh, M. F., & **Tawfik, M.** (2026). ByzaSpline-Fed: Gram-Weighted Functional Aggregation for Byzantine-Robust Federated Kolmogorov–Arnold Networks in Industrial IoT. *International Journal of Image, Graphics and Signal Processing*. DOI: 10.5815/ijigsp.2026.05.03 (**Q2, Scopus**)

3. **Tawfik, M.***, Almekhlafi, M. A. S. H., Shakah, G., Al-walidi, N. H., & Fathi, I. S. (2026). HIFN-Mamba: Hybrid Information Flow Networks with Selective State-Space Sequence Modeling for Intrusion Detection in the Internet of Medical Things. *Scientific Reports*. DOI: 10.1038/s41598-026-73701-6 (**Q1, Scopus, WoS**)

4. Hagar, A. A., **Tawfik, M.**, Alsmadi, I., Ahmed, A. M., & Aljarrah, N. A. (2026). XAI-Guided Quantum-Classical Fusion for Malware Detection: Integrating QSVM with Transformer Architectures. *Bulletin of Electrical Engineering and Informatics*, 15(5). DOI: 10.11591/eei.v15i5.11498 (**Q1, Scopus**)

5. Abdelhaliem, A. H., **Tawfik, M.**, Al Tamimi, N., & Fathi, I. S. (2026). Asymmetric Class-Conditional Routing in a Federated Quantum Mixture-of-Experts Improves Imbalanced Intrusion Detection in Edge Industrial IoT Networks. *Scientific Reports*. DOI: 10.1038/s41598-026-71421-5 (**Q1, Scopus, WoS**)

6. Abushariah, A. A. M., **Tawfik, M.**, Al-sellami, B., & Sawah, M. S. (2026). Multistage Advanced Persistent Threat Detection and Malware Attribution Using Mamba State Space Models with Kolmogorov Arnold Networks. *Scientific Reports*. DOI: 10.1038/s41598-026-71232-8 (**Q1, Scopus, WoS**)

7. Abdelhaliem, A. H., Alomari, T., **Tawfik, M.**, & Fathi, I. S. (2026). Causal-Aware Training with Counterfactual Supervision and Structural Causal Models Improves the Robustness of LLM-Based Vulnerability Detection. *Scientific Reports*. DOI: 10.1038/s41598-026-69332-6 (**Q1, Scopus, WoS**)

8. **Tawfik, M.*** (2026). ChronoFuse: Clock-Skew-Robust Multi-Sensor Fusion via Time-Aware State-Space Models. *IEEE Sensors Journal*. DOI: 10.1109/JSEN.2026.3737671 (**Q1, Scopus, WoS**)

9. **Tawfik, M.*** (2026). Sinc-Mamba-KAN: A Hybrid Learnable-Filter, Selective State-Space, and Kolmogorov–Arnold Network for Interpretable Infant Pre-Cry Classification. *IEEE Access*. DOI: 10.1109/ACCESS.2026.3733522 (**Q1, Scopus, WoS**)

10. Al-Sharo, Y. M., **Tawfik, M.**, Almadani, A. M., Abdelhaliem, A. H., Fathi, I. S., & Hassan, G. (2026). FedMamba-IoMT: Federated State Space Models with Differential Privacy and Byzantine Resilience for Privacy-Preserving Intrusion Detection in Internet of Medical Things. *PLOS One*. DOI: 10.1371/journal.pone.0355601 (**Q1, Scopus, WoS**)

11. **Tawfik, M.***, Almadani, A. M., Alkhamali, E. A., & Abu-Ein, A. A. (2026). DAMSE: A Dialect-Aware Multi-Strategy Ensemble Framework for Arabic Vishing Detection with Zero-Shot Learning. *PeerJ Computer Science*. DOI: 10.7717/peerj-cs.3985 (**Q1, Scopus**)

12. Talaat, F. M., **Tawfik, M.**, & Shaban, W. M. (2026). GreenAid: A Confidence-Weighted Ensemble Deep Learning System for Real-Time Plant Disease Detection and Management. *Scientific Reports*. DOI: 10.1038/s41598-026-57979-0 (**Q1, Scopus, WoS**)

13. Obeidat, R. A., Aljunaeidi, B. Z., Fathi, I. S., & **Tawfik, M.** (2026). EKT-XAI: Efficient Kolmogorov-Arnold Network Transformer for Lightweight Smishing Detection with Explainable AI. *Statistics, Optimization & Information Computing*, 15(6), 5111–5134. DOI: 10.19139/soic-2310-5070-2923 (**Q2, Scopus**)

14. Abdelhaliem, A. H., Aljunaeidi, B. Z., Fathi, I. S., **Tawfik, M.**, & Alsmadi, I. (2026). Integrating Fractional Generalized Laguerre Moment with Deep Residual Learning for Real-Time Attack Classification. *International Journal of Wireless and Microwave Technologies*. DOI: 10.5815/ijwmt.2026.03.16 (**Scopus**)




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## Journal Publications (cont.)

15. **Tawfik, M.*** (2026). MambaResp-KAN: A State Space Model with Kolmogorov-Arnold Networks and Diffusion-Based Augmentation for Explainable Respiratory Disease Classification. *International Journal of Image, Graphics and Signal Processing*. DOI: 10.5815/ijigsp.2026.03.10 (**Q2, Scopus**)

16. Mahyoub, E. M. N. S., Al-sellami, B., **Tawfik, M.**, & Abushariah, A. A. M. (2026). KANWhisper: Leveraging Learnable Activation Functions for Interpretable and Efficient Arabic Automatic Speech Recognition. *Scientific Reports*. DOI: 10.1038/s41598-026-55863-5 (**Q1, Scopus, WoS**)

17. Shaban, A. S., **Tawfik, M.***, Fathi, I., & Myla, A. (2026). MultiScaleKANNet: A Hybrid CNN-KAN-Transformer Architecture for Radiographic Bone-Loss Risk Stratification from Knee X-Rays. *Scientific Reports*. DOI: 10.1038/s41598-026-50126-9 (**Q1, Scopus, WoS**)

18. **Tawfik, M.***, Obeidat, R. A., Kamel, S., Aljarrah, N. A., Shehadeh, H. H., & Dalalah, A. (2026). FedEmoNet: Privacy-Preserving Federated Learning with TCN-Transformer Fusion for Cross-Corpus Speech Emotion Recognition. *PLOS One*. DOI: 10.1371/journal.pone.0342953 (**Q1, Scopus, WoS**)

19. Fathi, I. S., El-Saeed, A. R., **Tawfik, M.**, & Aly, M. (2026). Explainable Multi-Objective Evacuation Optimization: A Fractional-Order EvoMapX Approach with Grünwald-Letnikov Memory and Fractal Landscape Analysis. *Fractal and Fractional*. DOI: 10.3390/fractalfract10050314 (**Q1, Scopus, WoS**)

20. Ahmed, H. M. A., Zubair, S., & **Tawfik, M.*** (2026). A Privacy-Preserving Cloud Storage Framework with Hybrid Encryption, Homomorphic Keyword Search, and Blockchain-Based Integrity Verification. *Scientific Reports*. DOI: 10.1038/s41598-026-48705-x (**Q1, Scopus, WoS**)

21. Shakah, G., Al-sellami, B., Hagar, A. A., & **Tawfik, M.** (2026). MSDA-GDS: A Dual-Branch Hybrid Federated Explainable Deep Learning Framework for CAN Bus Intrusion Detection in Internet of Vehicles. *Statistics, Optimization & Information Computing*. DOI: 10.19139/soic-2310-5070-3599 (**Q2, Scopus**)

22. **Tawfik, M.***, Tarazi, H., Dalalah, A., Aljunaeidi, B., Shaban, W. M., & Fathi, I. S. (2026). Few-Shot Android Malware Classification with Quantum-Enhanced Prototypical Learning and Drift Detection. *Scientific Reports*. DOI: 10.1038/s41598-026-45738-0 (**Q1, Scopus, WoS**)

23. Abu-Ein, A. A., El-Saeed, A. R., Al-Hazaimeh, O. M., Ardah, H., Hassan, G., **Tawfik, M.**, & Fathi, I. S. (2026). Symmetry-Driven Multi-Objective Dream Optimization for Intelligent Healthcare Resource Management and Emergency Response. *Symmetry*. DOI: 10.3390/sym18030530 (**Q2, Scopus, WoS**)

24. Abu-Ein, A. A., Al-Hazaimeh, O. M., **Tawfik, M.***, & Fathi, I. S. (2026). Dynamic Fog Node Placement Optimization Using Adaptive Dynamic Pufferfish Optimization for Real-Time IoT Networks. *Scientific Reports*. DOI: 10.1038/s41598-026-41740-8 (**Q1, Scopus, WoS**)

25. Fathi, I. S., El-Saeed, A. R., **Tawfik, M.**, & Hassan, G. (2026). Fractional Tchebichef-ResNet-SE: A Hybrid Deep Learning Framework Integrating Fractional Tchebichef Moments with Attention Mechanisms for Enhanced IoT Intrusion Detection. *Fractal and Fractional*. DOI: 10.3390/fractalfract10030172 (**Q1, Scopus, WoS**)

26. Sawah, M. S., **Tawfik, M.**, & Alsmadi, I. (2026). Advancements in UAV-Based Traffic Monitoring: A Systematic Review of Deep Learning and Edge Computing. *Bulletin of Electrical Engineering and Informatics*, 15(1). DOI: 10.11591/eei.v15i1.9596 (**Q1, Scopus**)

27. Aljarrah, N., Shehadeh, H. H., Obeidat, R. A., & **Tawfik, M.** (2026). Cross-Attention Feature Fusion for Interpretable Zero-Day Malware Detection. *Statistics, Optimization & Information Computing*. DOI: 10.19139/soic-2310-5070-2900 (**Q2, Scopus**)

28. Shehadeh, H. H., Aljarrah, N. A., Obeidat, R. A., Abu-Ein, A. A., & **Tawfik, M.** (2026). Attention-Guided Graph Neural Networks with Adaptive Feature Selection for Explainable Software Defect Prediction. *Statistics, Optimization & Information Computing* (**Q2, Scopus**)




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## Journal Publications (cont.)

29. **Tawfik, M.*** (2026). HIFN-Transformer: Learnable Information-Theoretic Parameters for Interpretable Deep Classification. *IEEE Access*. DOI: 10.1109/ACCESS.2026.3719211 (**Q1, Scopus, WoS**)

30. **Tawfik, M.***, Heshmat, M., Fathi, I. S., Shaban, A. S., Shakah, G., & Shaban, W. M. (2026). Federated Learning-Based Cervical Cancer Classification Using a Novel Hybrid KAN-ViT-Autoencoder Architecture. *Neural Computing and Applications*. DOI: 10.1007/s00521-026-12311-9 (**Q1, Scopus, WoS**)

31. Elkamhawy, E., Sawah, M. S., **Tawfik, M.**, & Ismail, A. S. (2026). Ensemble Neural Network Models for Stability Prediction and Optimization of Hydraulic Structures Considering Uplift Pressure and Exit Gradient. *Scientific Reports*. DOI: 10.1038/s41598-025-25149-3 (**Q1, Scopus, WoS**)

32. Al-Hazaimeh, O. M., Abu-Ein, A. A., Fathi, I. S., & **Tawfik, M.** (2025). Securing IoT Systems Using Artificial Intelligence-Driven Approaches. *Statistics, Optimization & Information Computing*. DOI: 10.19139/soic-2310-5070-3342 (**Q2, Scopus**)

33. Aljunaeidi, B. Z., **Tawfik, M.**, Alsmadi, I. M., & Al-Sharo, Y. M. (2025). Cross-Attention Transformer Networks with Optimized Feature Selection for Explainable Respiratory Disease Classification. *Statistics, Optimization & Information Computing*. DOI: 10.19139/soic-2310-5070-2912 (**Q2, Scopus**)

34. Fathi, I. S., Aljunaeidi, B., & **Tawfik, M.** (2025). A High-Dimensional Feature Selection Based on Modified Energy Valley Optimizer and ReliefF Algorithm. *Statistics, Optimization & Information Computing*. DOI: 10.19139/soic-2310-5070-2862 (**Q2, Scopus**)

35. **Tawfik, M.***, Haider, N. S., Fathi, I. S., Nimbhore, S. S., Alsmadi, I. M., & Sawah, M. S. (2025). E-RespiNet: An LLM-ELECTRA Driven Triple-Stream CNN with Feature Fusion for Asthma Classification. *PLOS One*. DOI: 10.1371/journal.pone.0334528 (**Q1, Scopus, WoS**)

36. Abdelhaliem, A. H., Fathi, I. S., & **Tawfik, M.** (2025). Fast and Efficient Feature Selection in AI Application Based on Enhanced Binary Secretary Bird Optimization Algorithm. *Statistics, Optimization & Information Computing*. DOI: 10.19139/soic-2310-5070-2597 (**Q2, Scopus**)

37. Ahmed, A. M., Elngar, A. A., & **Tawfik, M.** (2025). HydroNet: A Novel Hybrid CNN-Transformer Architecture for High-Precision Water Quality Classification with Feature Fusion. *International Journal of Intelligent Engineering and Systems*. DOI: 10.22266/ijies2025.0731.20 (**Q2, Scopus**)

38. **Tawfik, M.***, Fathi, I. S., & Hassan, A. (2025). Quantum-Resistant Privacy-Preserving IoT Authentication via Zero-Knowledge Proofs and Blockchain Integration. *Statistics, Optimization & Information Computing*. DOI: 10.19139/soic-2310-5070-2399 (**Q2, Scopus**)

39. **Tawfik, M.***, Fathi, I. S., & Hassan, A. (2025). Transforming IoT Security through Large Language Models: A Comprehensive Systematic Review and Future Directions. *Statistics, Optimization & Information Computing*. DOI: 10.19139/soic-2310-5070-2424 (**Q2, Scopus**)

40. **Tawfik, M.**, & Fathi, I. S. (2025). Enhancing IoT Systems with Bio-Inspired Intelligence in Fog Computing Environments. *Statistics, Optimization & Information Computing*. DOI: 10.19139/soic-2310-5070-2305 (**Q2, Scopus**)

41. Al-Bukhrani, M. A., Oluwajana, D. I., Alrefaee, Y. M. H., & **Tawfik, M.** (2025). Adoption of AI Writing Tools Among Academic Researchers: A Theory of Reasoned Action Approach. *PLOS One*. DOI: 10.1371/journal.pone.0313837 (**Q1, Scopus, WoS**)




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## Journal Publications (cont.)

42. **Tawfik, M.***, Abu-Ein, A. A., Abdelhaliem, A. H., Al-Sharo, Y. M., & Fathi, I. S. (2025). Explainable Few-Shot Learning with Modern BERT for Detecting Emerging Phishing Attacks Using XF-PhishBERT. *Scientific Reports*. DOI: 10.1038/s41598-025-27500-0 (**Q1, Scopus, WoS**)

43. **Tawfik, M.***, Abu-Ein, A. A., Noaman, H. M., Abdelhaliem, A. H., & Fathi, I. S. (2025). FedMedSecure: Federated Few-Shot Learning with Cross-Attention Mechanisms and Explainable AI for Collaborative Healthcare Cybersecurity. *Scientific Reports*. DOI: 10.1038/s41598-025-25107-z (**Q1, Scopus, WoS**)

44. Alkhamali, E. A., Allinjawi, A. A., Ashari, R. B., & **Tawfik, M.** (2025). FedSER-XAI: PSO-Optimized Multi-Stream Cross-Attention Transformer with Graph Features for Explainable Federated Speech Emotion Recognition. *Scientific Reports*. DOI: 10.1038/s41598-025-28686-z (**Q1, Scopus, WoS**)

45. Fathi, I. S., El-Saeed, A. R., Ardah, H., **Tawfik, M.**, & Hassan, G. (2025). Integrating Fractional Calculus Memory Effects and Laguerre Polynomial in Secretary Bird Optimization for Gene Expression Feature Selection. *Mathematics*. DOI: 10.3390/math13213511 (**Q1, Scopus, WoS**)

46. Aldhaheri, T. A., Kulkarni, S. B., Bhise, P. R., & **Tawfik, M.** (2025). Utilizing Machine and Deep Learning Algorithms to Identify Learning-Related Features in Electroencephalography Data During Second Language Acquisition. *Cogent Arts & Humanities*. DOI: 10.1080/23311983.2025.2485696 (**Q2, Scopus, WoS**)

47. **Tawfik, M.***, & Singh, R. (2024). Optimized Intrusion Detection in IoT and Fog Computing Using Ensemble Learning and Advanced Feature Selection. *PLOS One*, 19(8), e0304082. DOI: 10.1371/journal.pone.0304082 (**Q1, Scopus, WoS**)

48. **Tawfik, M.***, Almadani, A. M., & Alharbi, A. A. (2020). A Review: The Risks and Weakness Security on the IoT. *SSRN*. DOI: 10.2139/ssrn.3558835

49. **Tawfik, M.***, et al. SFB-KAN: A Federated B-Spline Kolmogorov-Arnold Network Framework for In-Vehicle Intrusion Detection. (In Press)

50. **Tawfik, M.*** MoE-Mamba: Sparse Mixture-of-Experts State-Space Networks for Efficient Alert Triage in Security Operations Centres. *Computers and Electrical Engineering* (Under Review)

**Conference Papers & Book Chapters**

51. Al-madani, A. M., Ying, X., **Tawfik, M.**, & Ahmed, Z. A. (2024). An Optimized Blockchain Model for Secure and Efficient Data Management in Internet of Things. *2024 IEEE International Conference on Information Technology, Electronics and Intelligent Communication Systems (ICITEICS)*, June 2024. DOI: 10.1109/ICITEICS61368.2024.10624817

52. Alharbi, A., Dhopeshwarkar, M., Ahmed, Z. A., Mahyoub, E., **Tawfik, M.**, & Almadani, A. M. (2024). A Framework for Epileptic Seizure Monitoring Based on IoT and Machine Learning Technologies. *2024 3rd International Conference for Innovation in Technology (INOCON)*, March 2024. DOI: 10.1109/INOCON60754.2024.10512226

53. Alharbi, A. A., Dhopeshwarkar, M., Ahmed, Z. A., Mahyoub, E., **Tawfik, M.**, & Al-sellami, B. (2023). Enhancing Epileptic Seizure Detection Through Advanced Artificial Intelligence Analysis of EEG Signals. *2023 3rd International Conference on Smart Generation Computing, Communication and Networking (SMART GENCON)*, December 2023. DOI: 10.1109/SMARTGENCON60755.2023.10442095




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## Conference Papers & Book Chapters (cont.)

54. Naji, E. M., Maslekar, A. A., Ahmed, Z. A., Alharbi, A., Al-sellami, B., & **Tawfik, M.** (2023). Advancing Arabic Hate Speech Detection via Neural Transfer Learning with BERT. *2023 3rd International Conference on Smart Generation Computing, Communication and Networking (SMART GENCON)*, December 2023. DOI: 10.1109/SMARTGENCON60755.2023.10441885

55. Naji, E. M., Maslekar, A. A., Ahmed, Z. A., Almadani, A. M., **Tawfik, M.**, & Alharbi, A. (2023). Toward Accurate and Flexible Arabic Speech Recognition: A Comprehensive Framework. *2023 Global Conference on Information Technologies and Communications (GCITC)*, December 2023. DOI: 10.1109/GCITC60406.2023.10426210

56. Al-Hejri, A. M., Al-Zidi, N. M., **Tawfik, M.**, Albakhrani, A., & Sable, A. H. (2022). A Facilitation System for Arabic Foreigners in India Using the Web and Android System. *2022 8th International Conference on Advanced Computing and Communication Systems (ICACCS)*, March 2022. DOI: 10.1109/ICACCS54159.2022.9785022

57. **Tawfik, M.***, Nimbhore, S., Al-Zidi, N. M., & Almadani, A. M. (2022). Multi-features Extraction for Automating Covid-19 Detection from Cough Sound using Deep Neural Networks. *2022 4th International Conference on Smart Systems and Inventive Technology (ICSSIT)*, January 2022. DOI: 10.1109/ICSSIT53264.2022.9716529

58. **Tawfik, M.***, Al-Zidi, N. M., Al-sellami, B., & Nimbhore, S. (2021). Internet of Things-Based Middleware Against Cyber-Attacks on Smart Homes using Software-Defined Networking and Deep Learning. *2021 2nd International Conference on Computational Methods in Science & Technology (ICCMST)*, December 2021. DOI: 10.1109/ICCMST54943.2021.00014

59. Al-Zidi, N. M., **Tawfik, M.**, Al-Hejri, A. M., Fathail, I., Aldhaheri, T. A., & Al-Tashi, Q. (2021). Smart System for Real-Time Remote Patient Monitoring Based on Internet of Things. *2021 2nd International Conference on Computational Methods in Science & Technology (ICCMST)*, December 2021. DOI: 10.1109/ICCMST54943.2021.00013

60. Al-Zidi, N. M., **Tawfik, M.**, Aldhaheri, T., Almadani, A. M., Ahmed, Z. A., & Al-Zidi, A. M. (2023). COVID-19 Detection and Remote Tracking System Using IoT-Based Wearable Bracelet. *Cognitive Science and Technology Book Chapter*, January 2023. DOI: 10.1007/978-981-19-2358-6_29

61. Fathail, I., Bhagile, V., **Tawfik, M.**, & Aldhaheri, T. (2022). Comparison of Machine Learning Algorithms and Neural Network for Breast Cancer Prediction. *International Conference on Intelligent Computing and Smart Communication Book Chapter*, November 2022. DOI: 10.1007/978-981-19-1653-3_17

62. **Tawfik, M.***, Mahyoub, E., Ahmed, Z. A., Al-Zidi, N. M., & Nimbhore, S. (2022). Classification of Epileptic Seizure Using Machine Learning and Deep Learning Based on Electroencephalography (EEG). *Springer Book Chapter*, August 2022. DOI: 10.1007/978-981-19-2130-8_15

63. Al-madani, A. M., Gaikwad, A., Ahmed, Z. A., Mahale, V., Alsubari, S. N., & **Tawfik, M.** (2022). Web Application Based on Deep Learning for Detecting COVID-19 Using Chest X-Ray Images. *New Perspectives in Medical Records Book Chapter*, January 2022. DOI: 10.1007/978-3-030-99457-0_18

64. Ahmed, Z. A., Jadhav, M., Almadani, A. M., **Tawfik, M.***, & Alshareef, A. (2022). Real-Time Detection of Student Engagement: Deep Learning-Based System. *International Conference on Innovative Computing and Communications Book Chapter*, January 2022. DOI: 10.1007/978-981-16-2594-7_26

65. **Tawfik, M.***, Al-Zidi, N. M., Fathail, I., & Nimbhore, S. (2021). Asthma Detection System: Machine and Deep Learning-Based Techniques. *Springer Book Chapter*, November 2021. DOI: 10.1007/978-981-19-1653-3_16